

ABSTRACT OF THE DISCLOSURE

A cryogenic vessel includes a first, outer vessel assembly having an outer vessel and a liquid fill line assembly and a second, ullage space vessel having a bottom and disposed within the first, outer vessel, adjacent to the top of the first, outer vessel. The liquid fill line assembly has a venturi assembly adjacent the bottom of the ullage space vessel. The venturi assembly is structured to create a low pressure zone, relative to the ullage space vessel, during a fill procedure whereby, during a fill procedure, fluid is drawn from within the ullage space vessel into the fill line assembly.